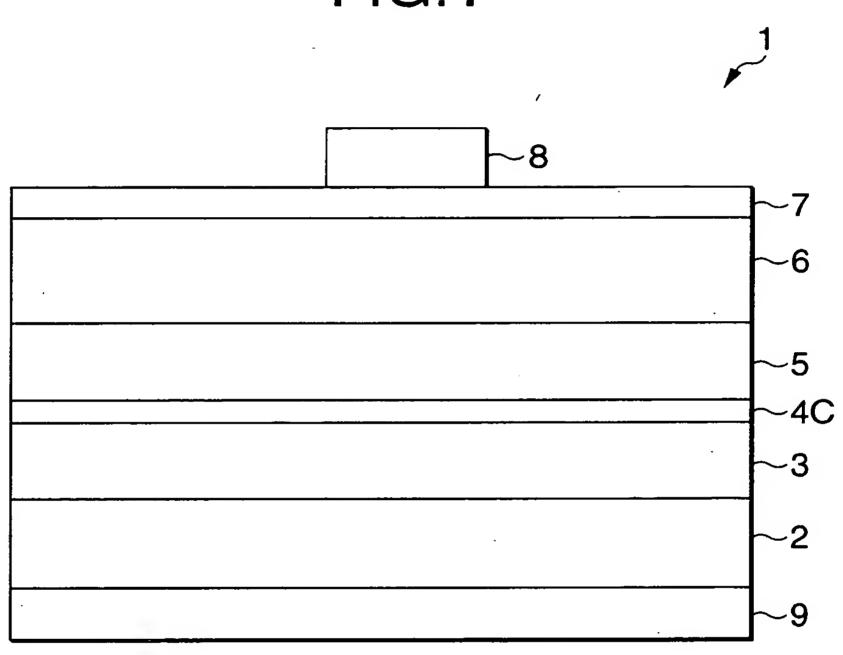
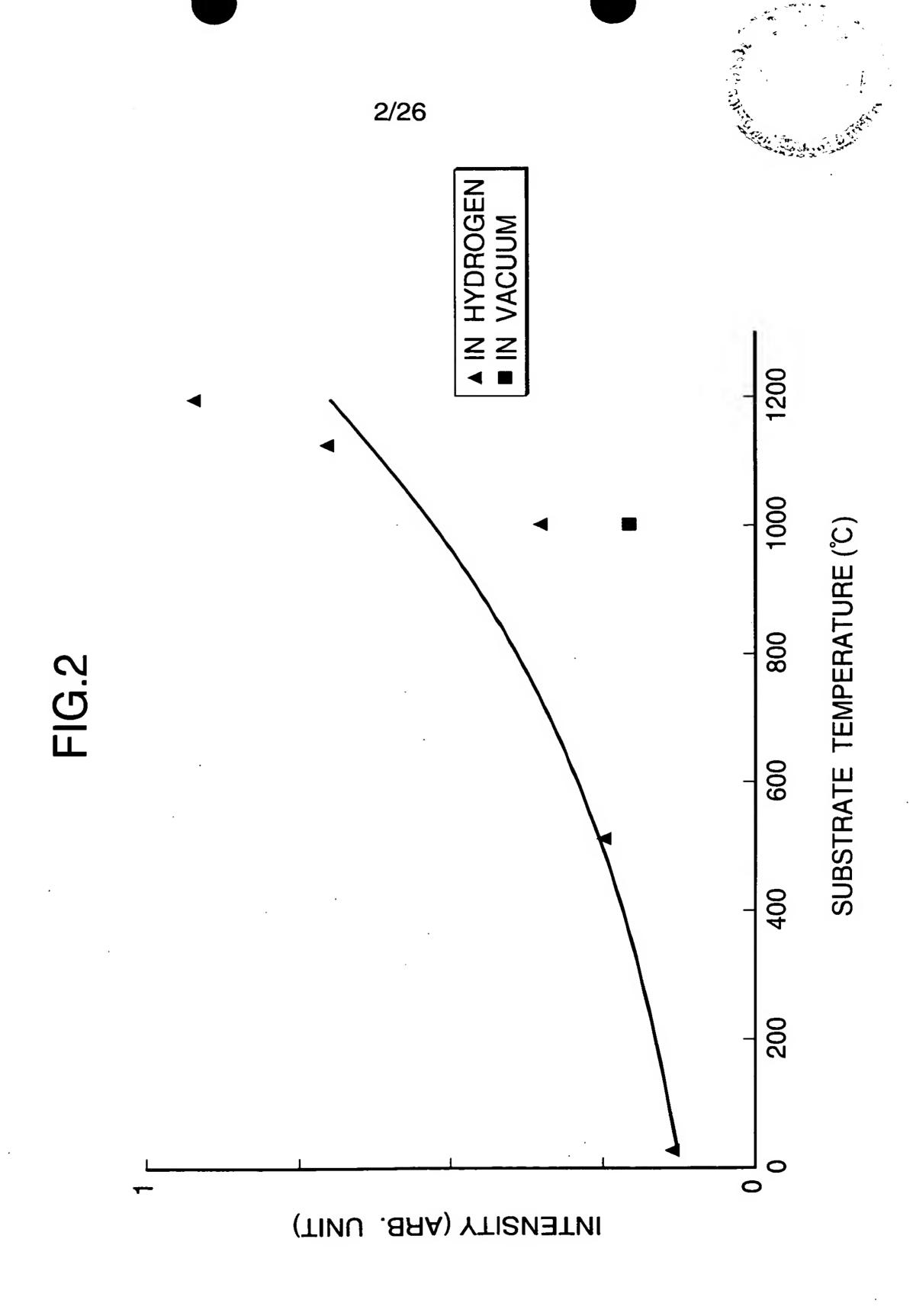
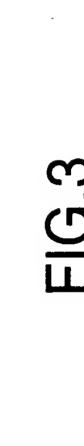
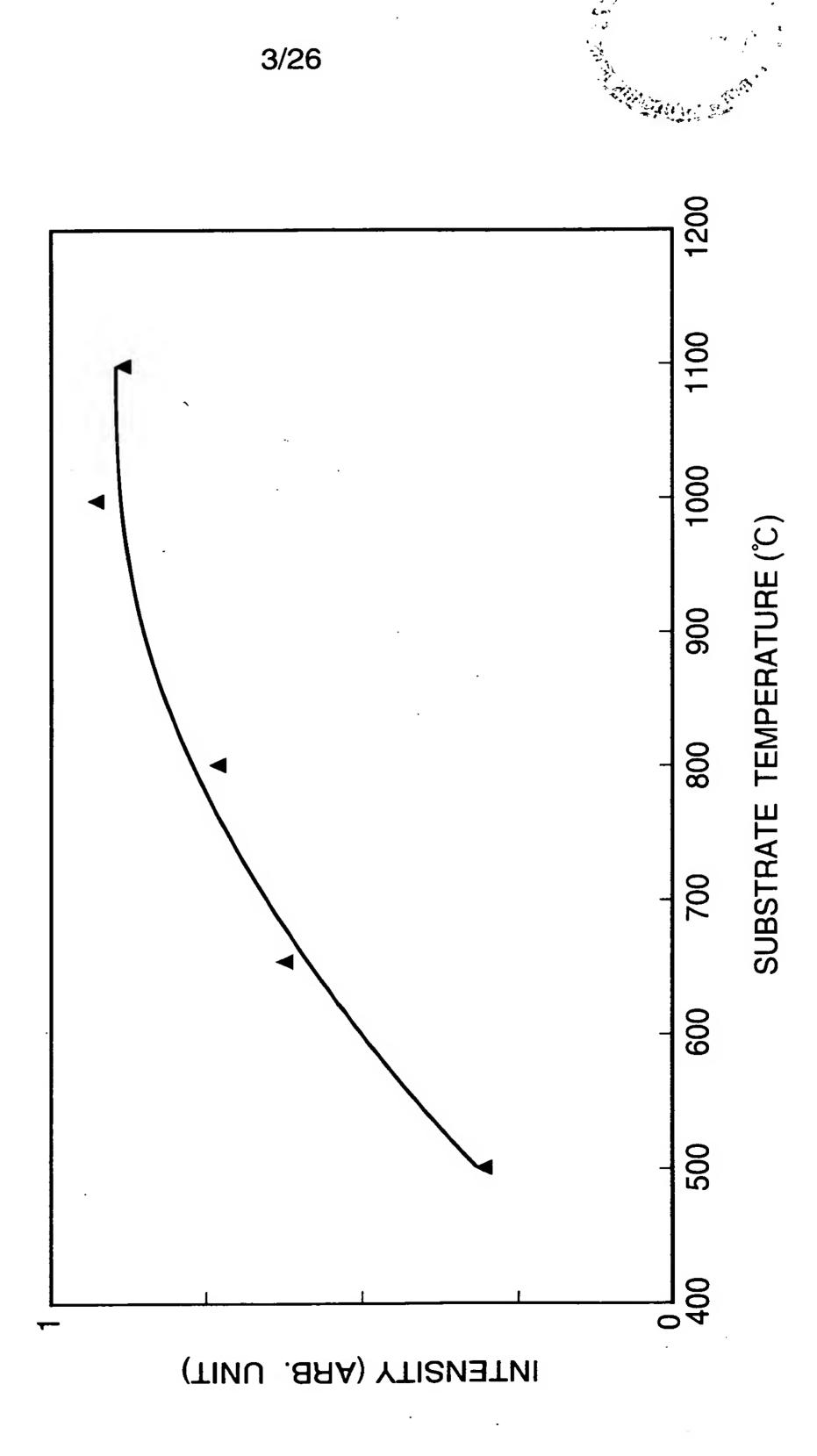


FIG.1









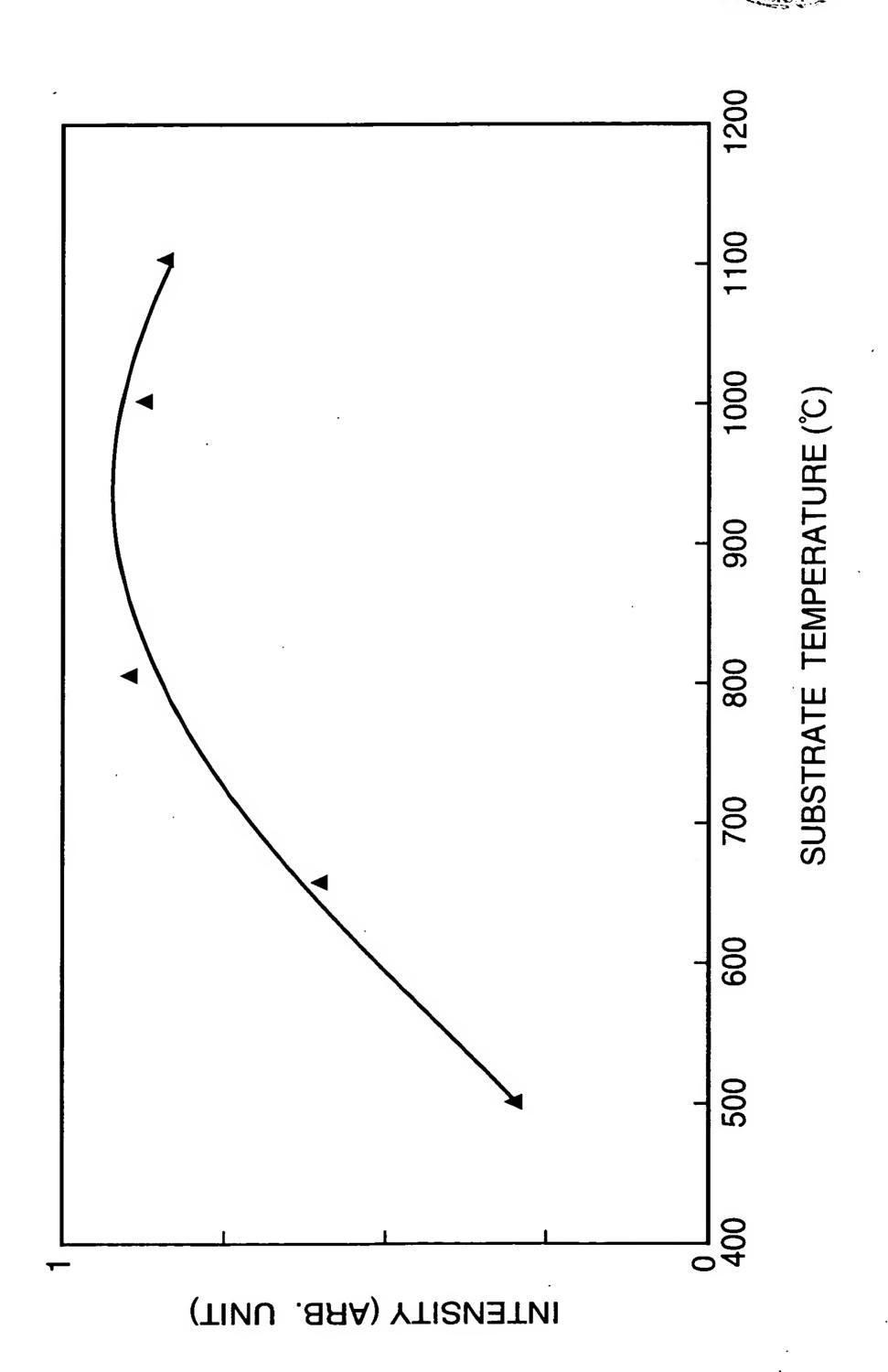






FIG.5

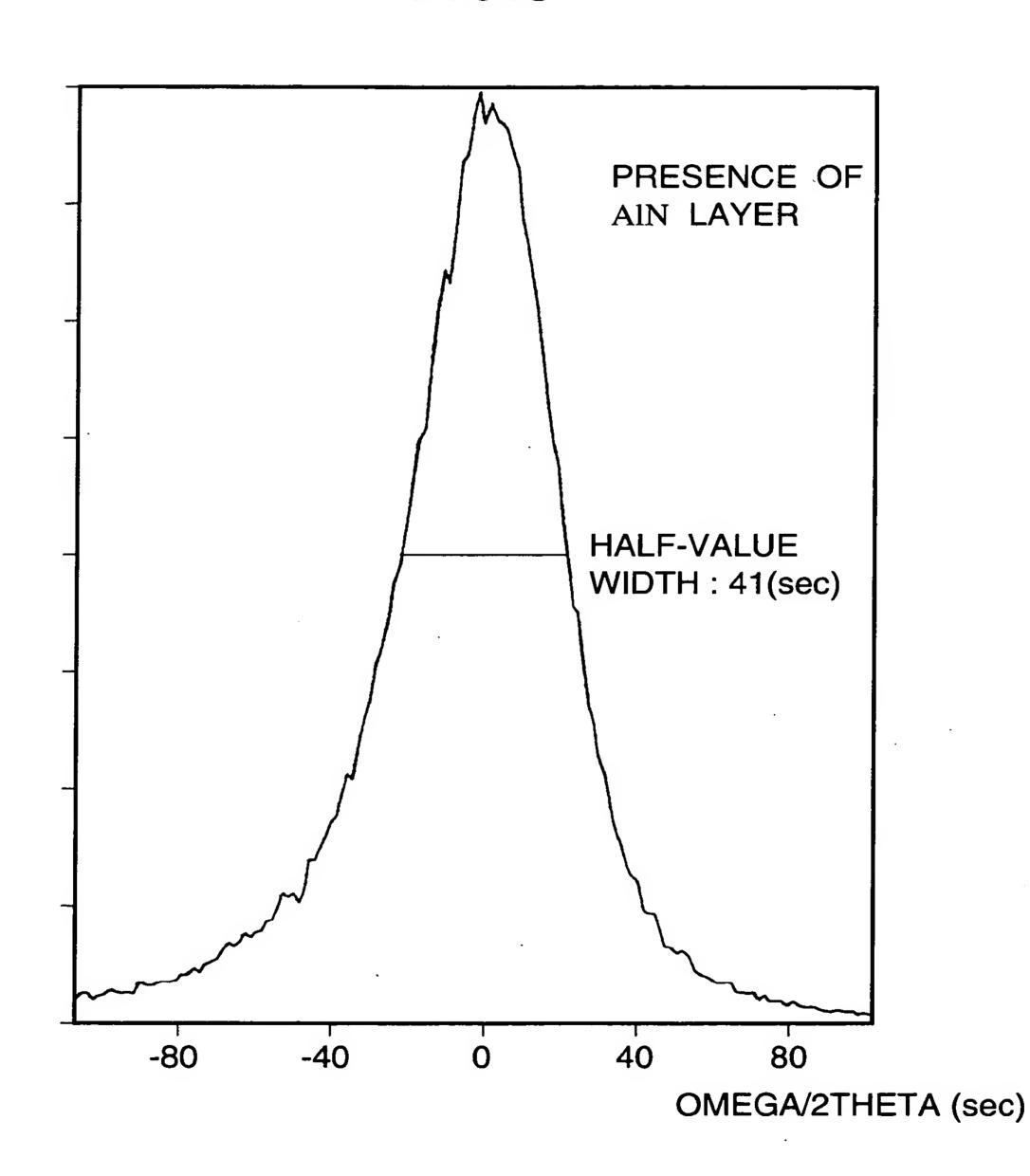




FIG.6

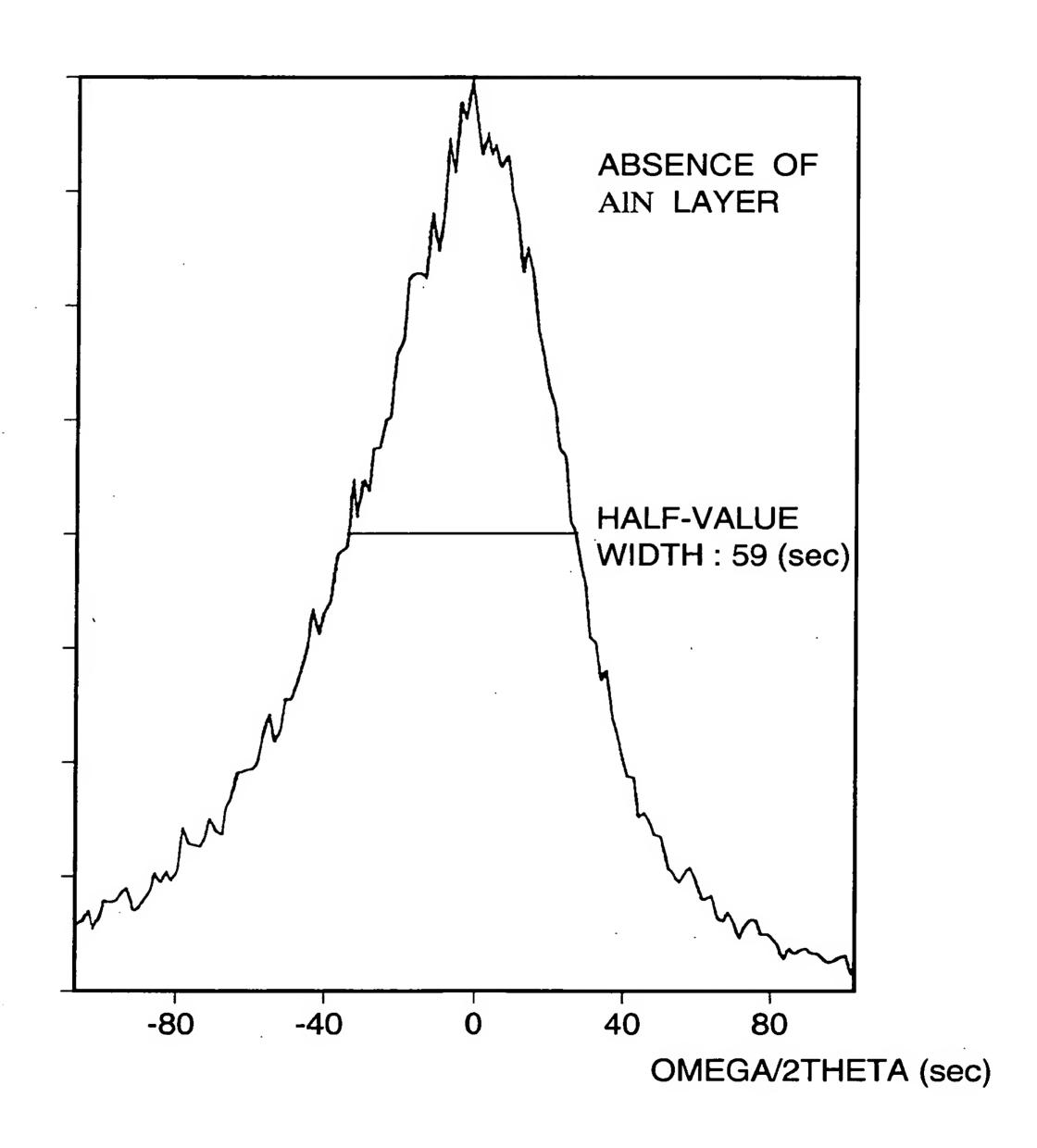
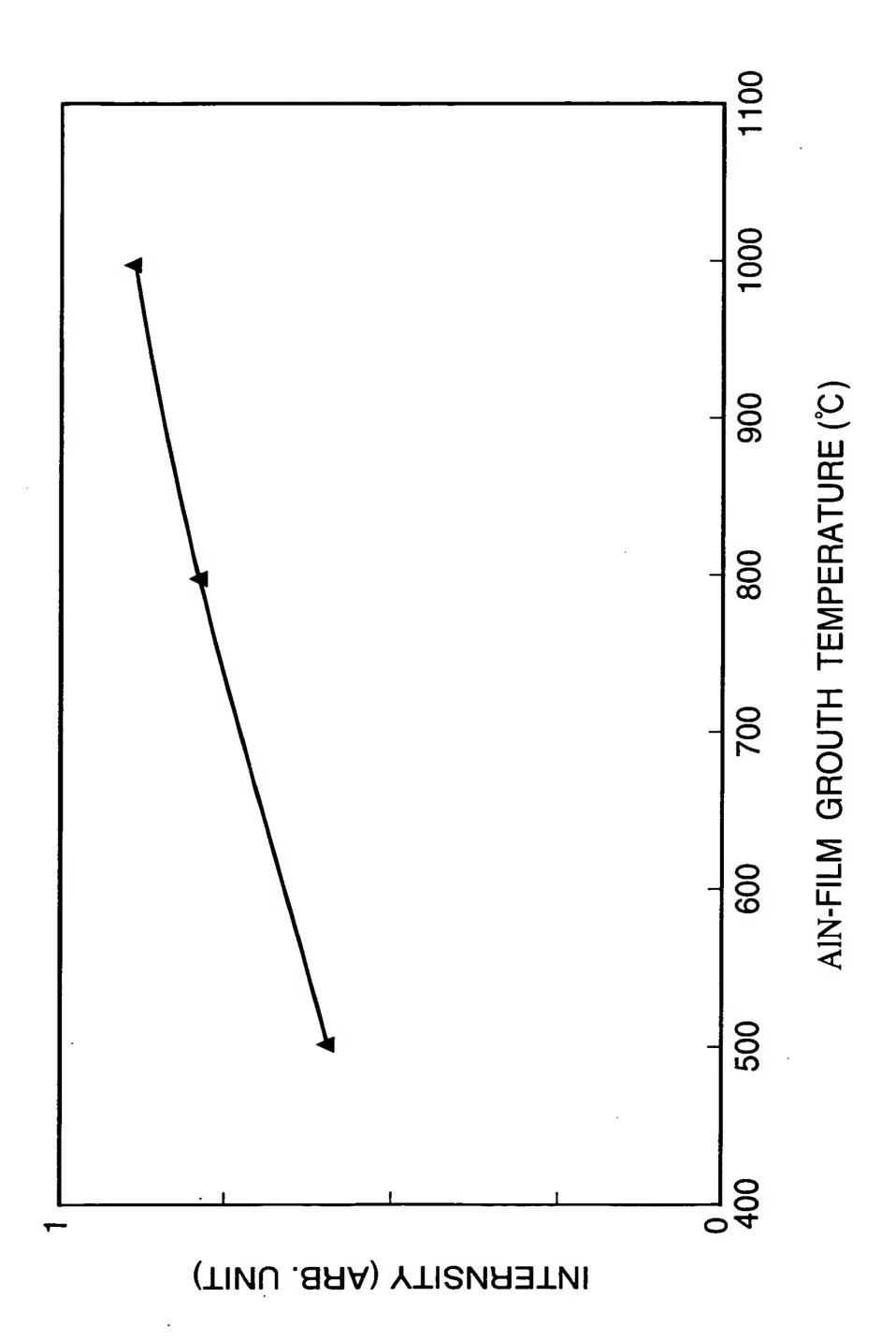


FIG.7





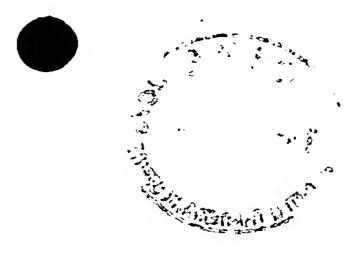


FIG.8

## X-RAY ROCKING CURVE GaN/AIN/TiN/SaP

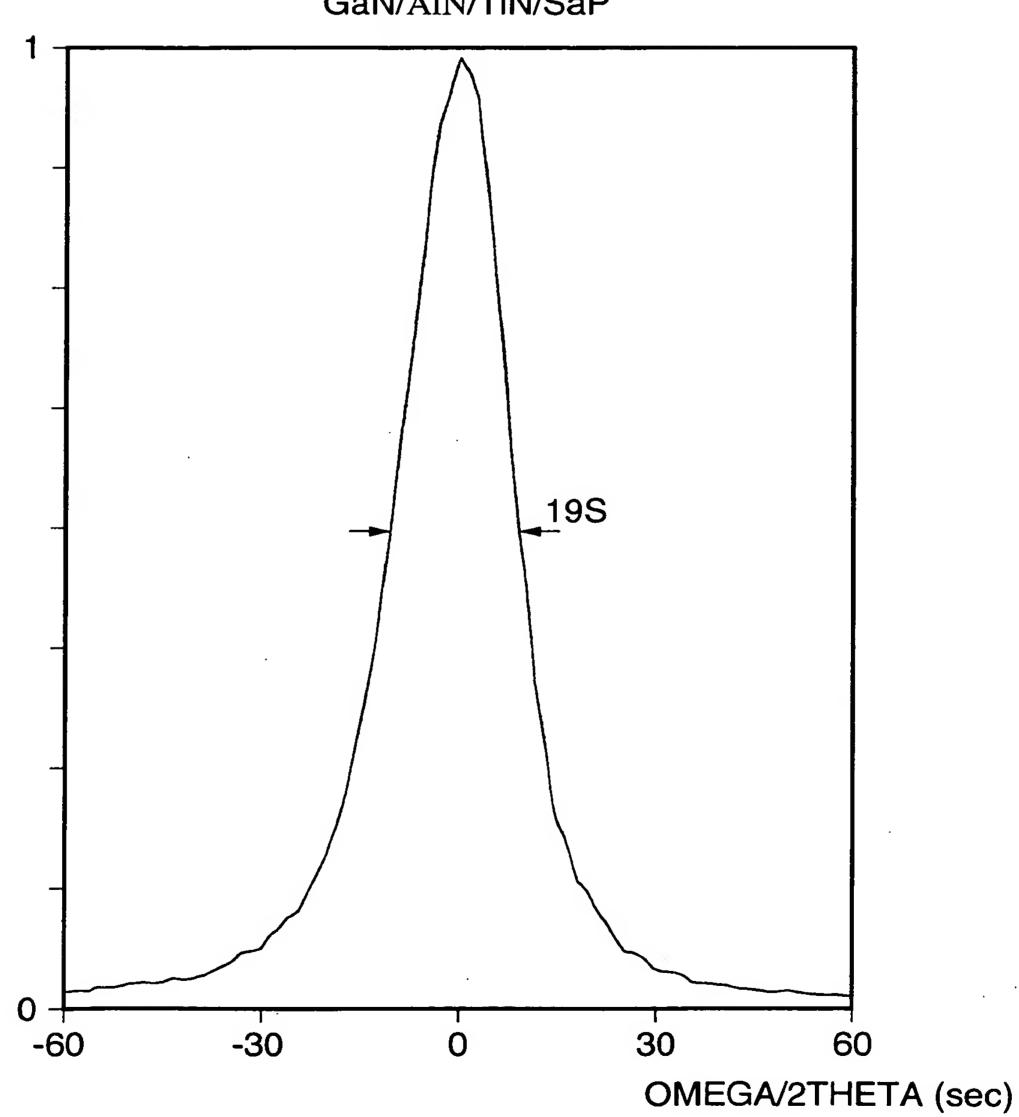
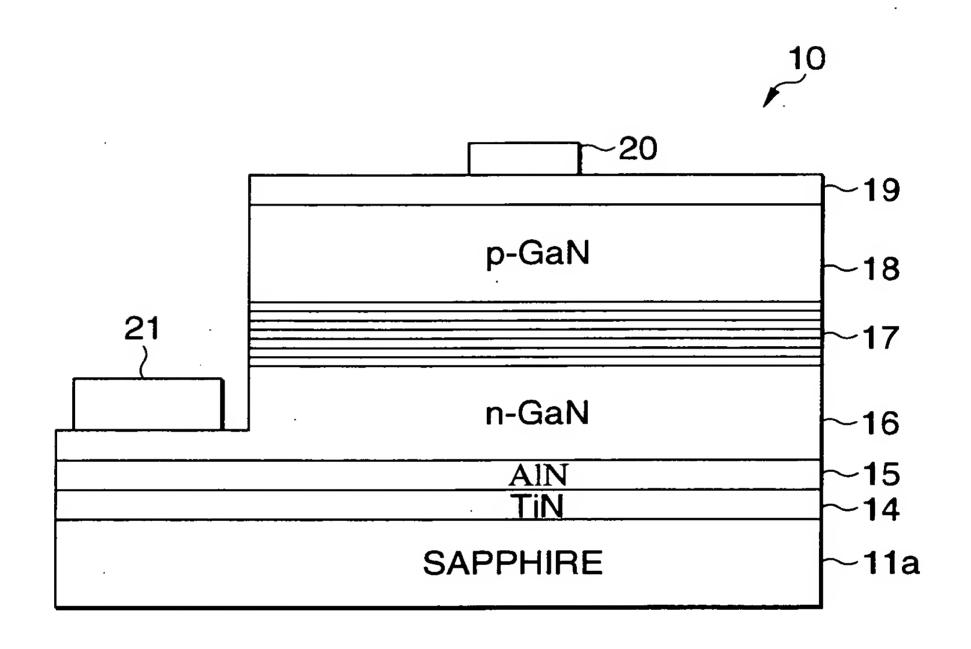




FIG.9



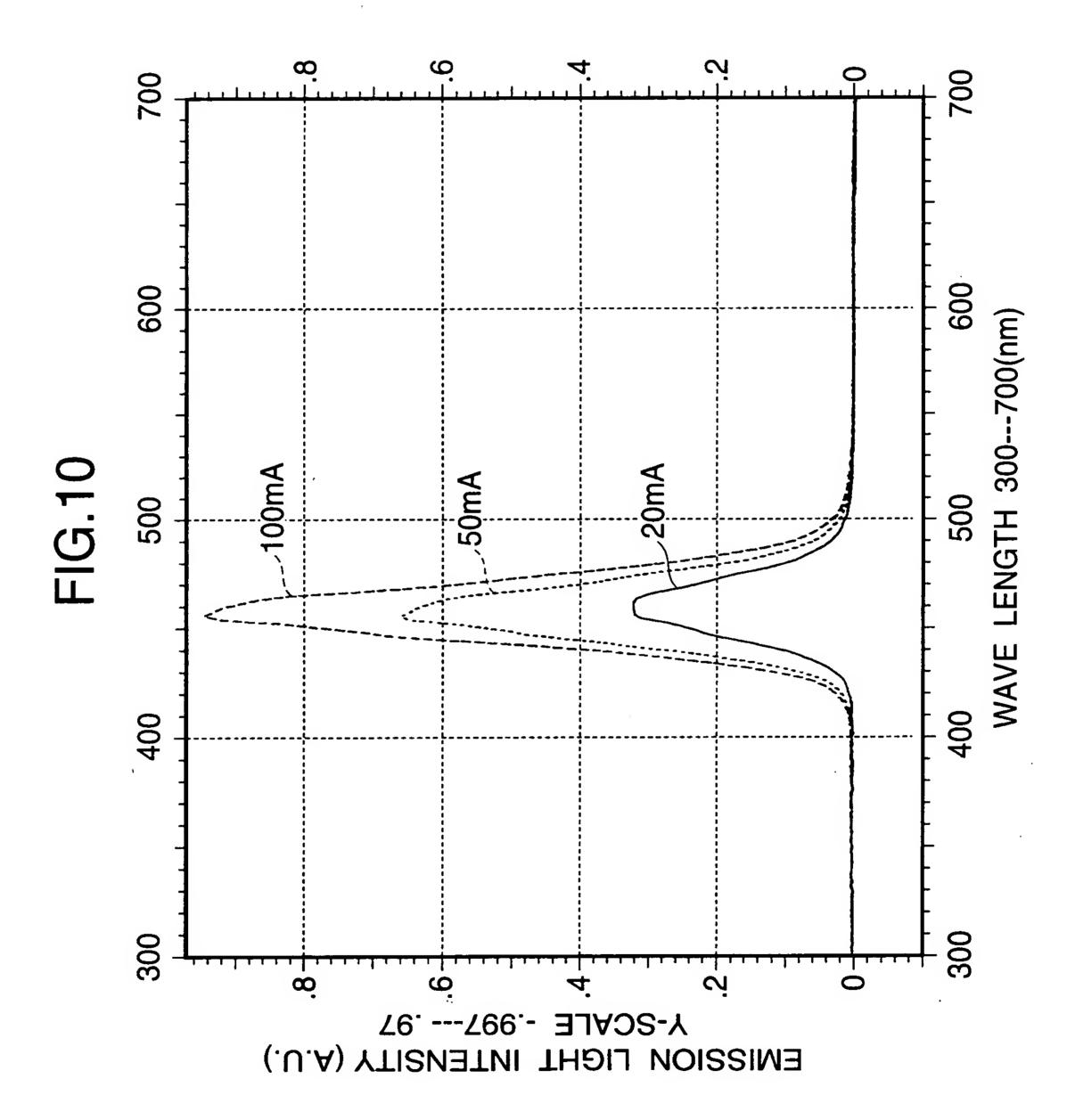
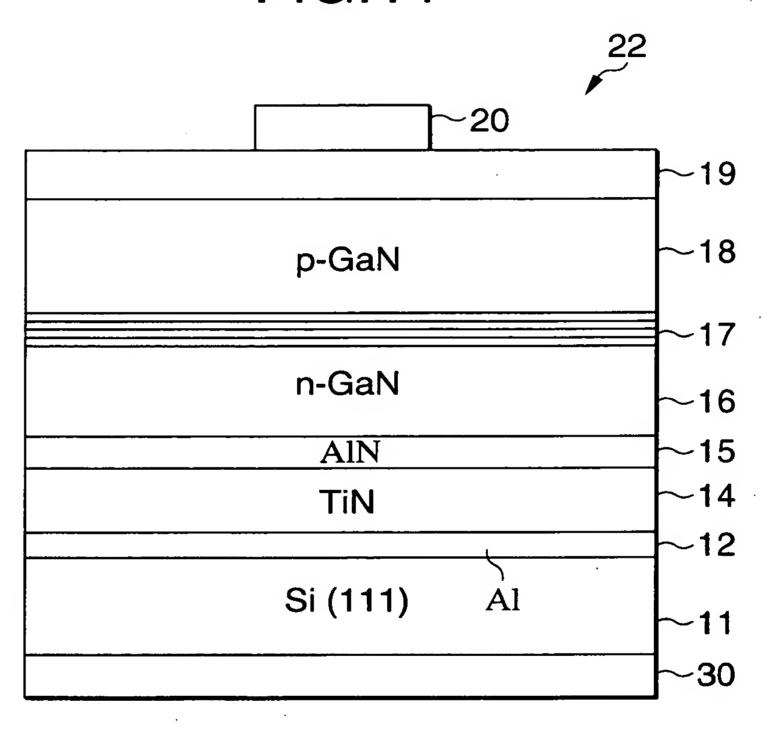
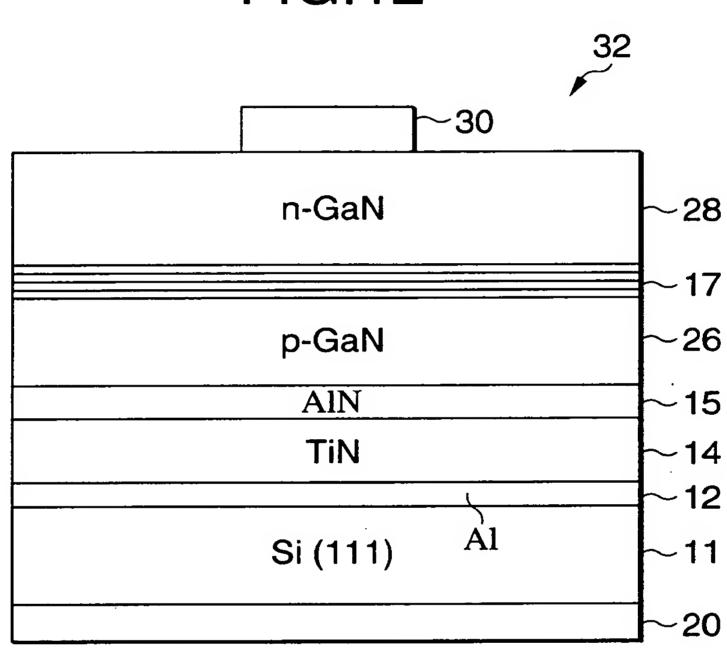


FIG.11





**FIG.12** 



: -- 1



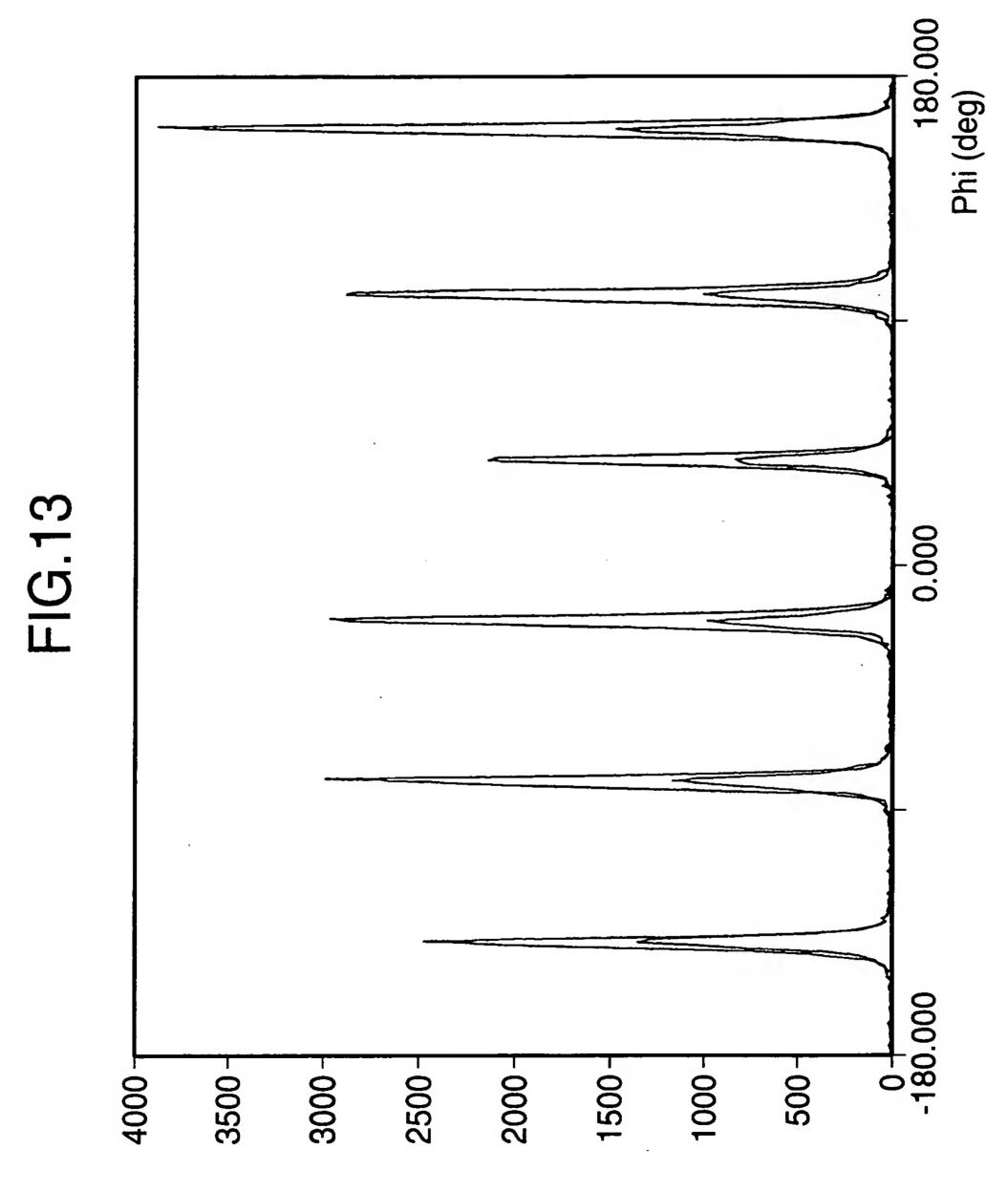
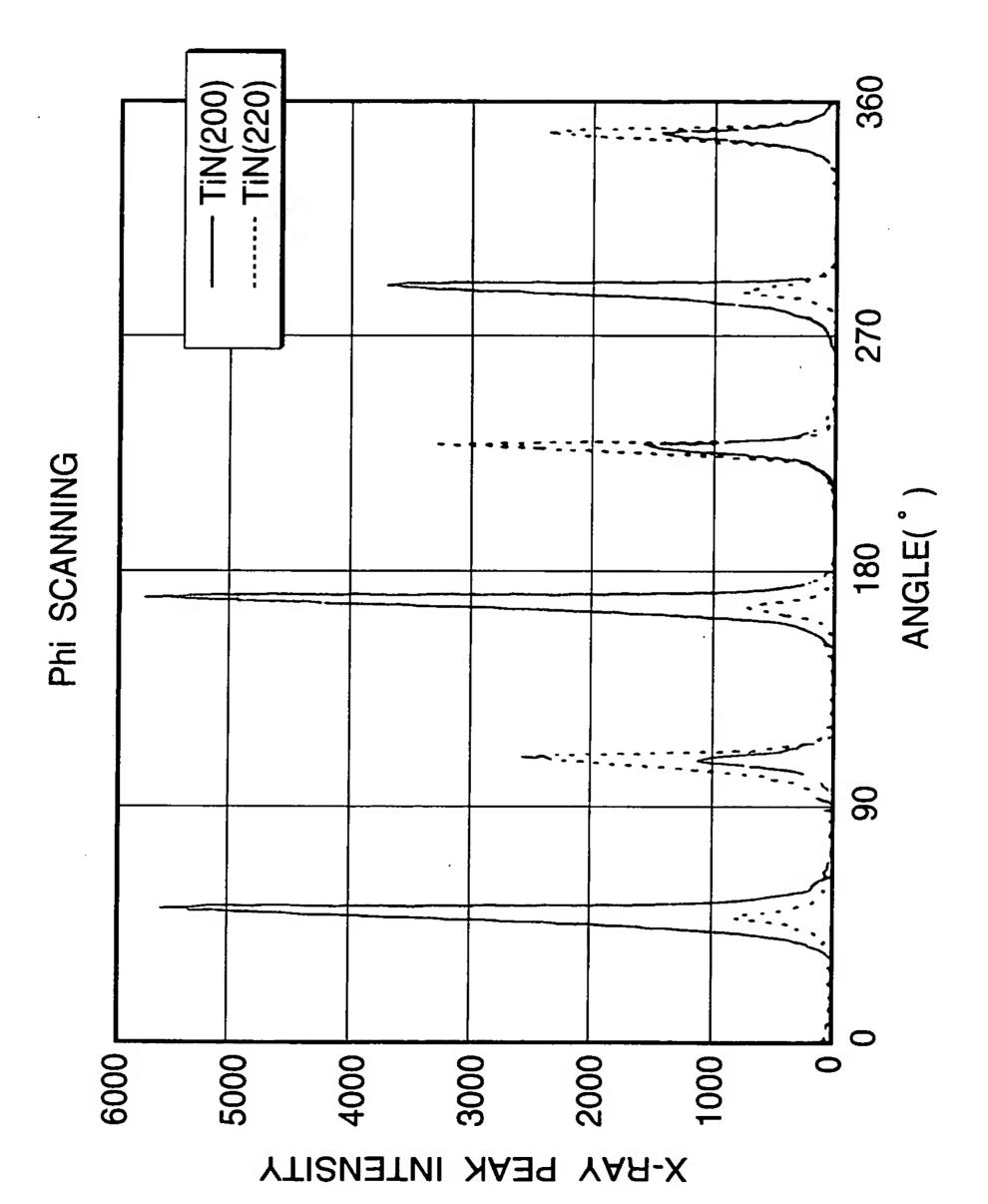
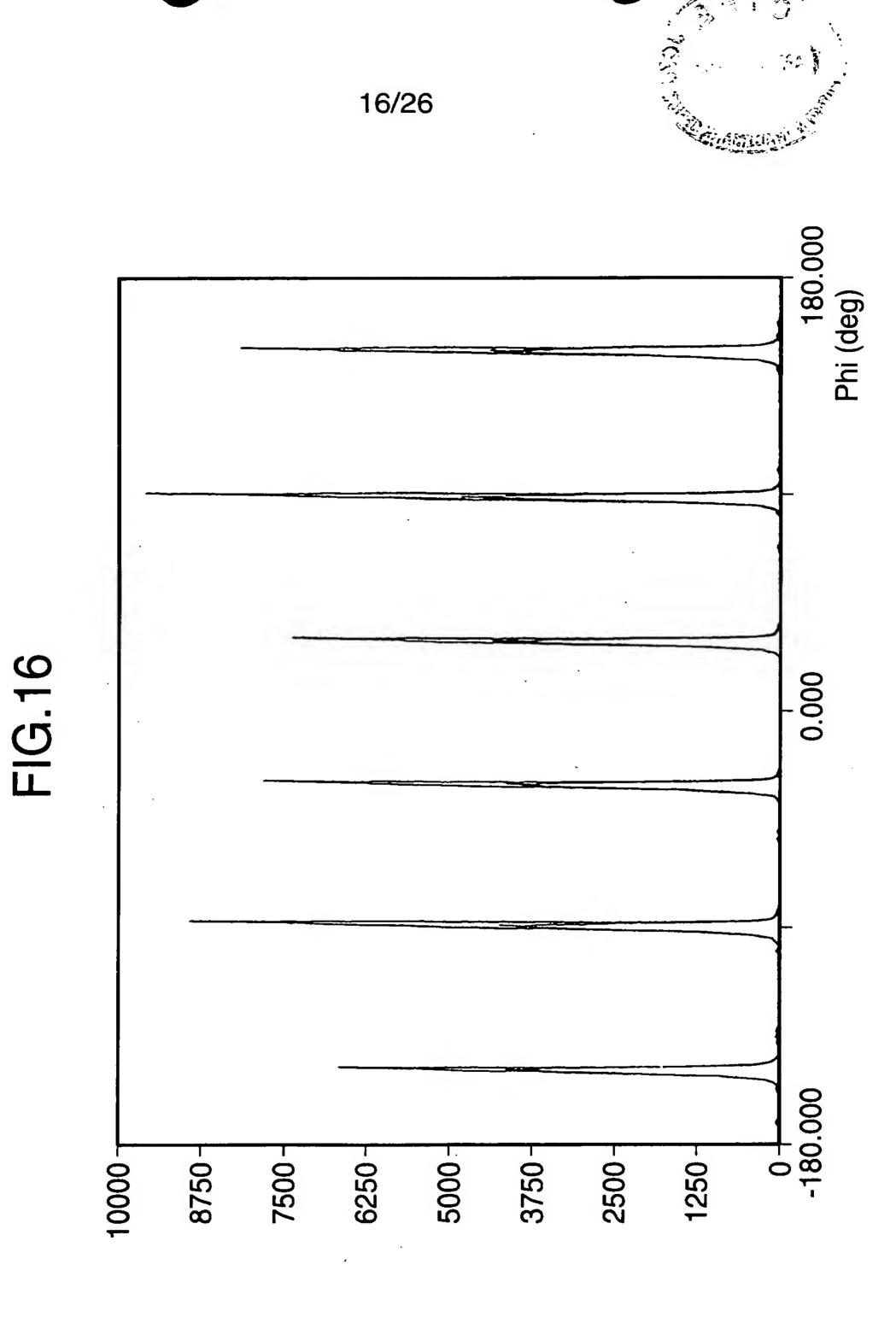


FIG.14



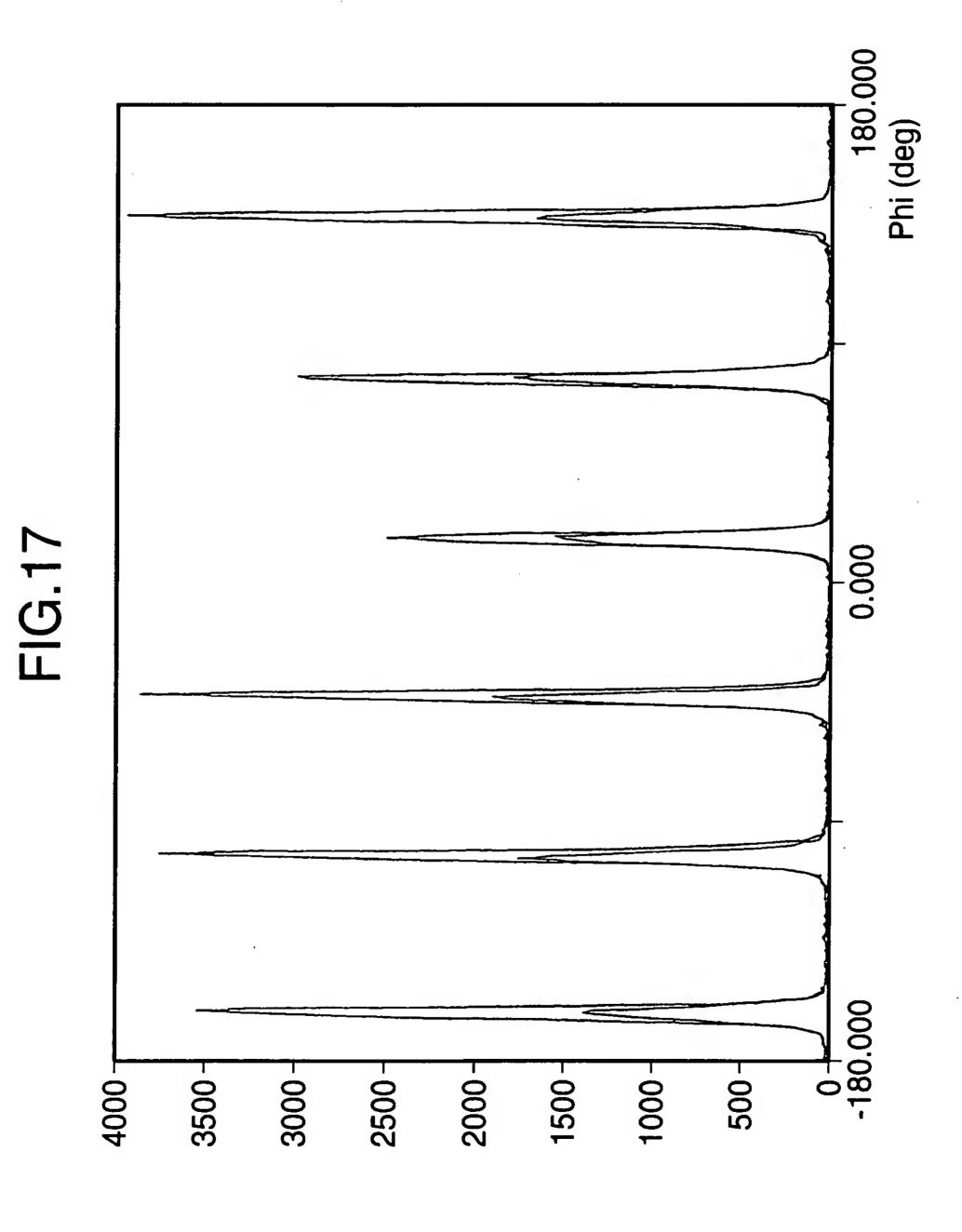
360 240 Ti (15000Å)/TiN (5000Å)/A1/Si Ti Phi SCANNING FIG.15 180 120 9 Phi DIFFRACTION PEAK INTENSITY (A.U.)

15/26

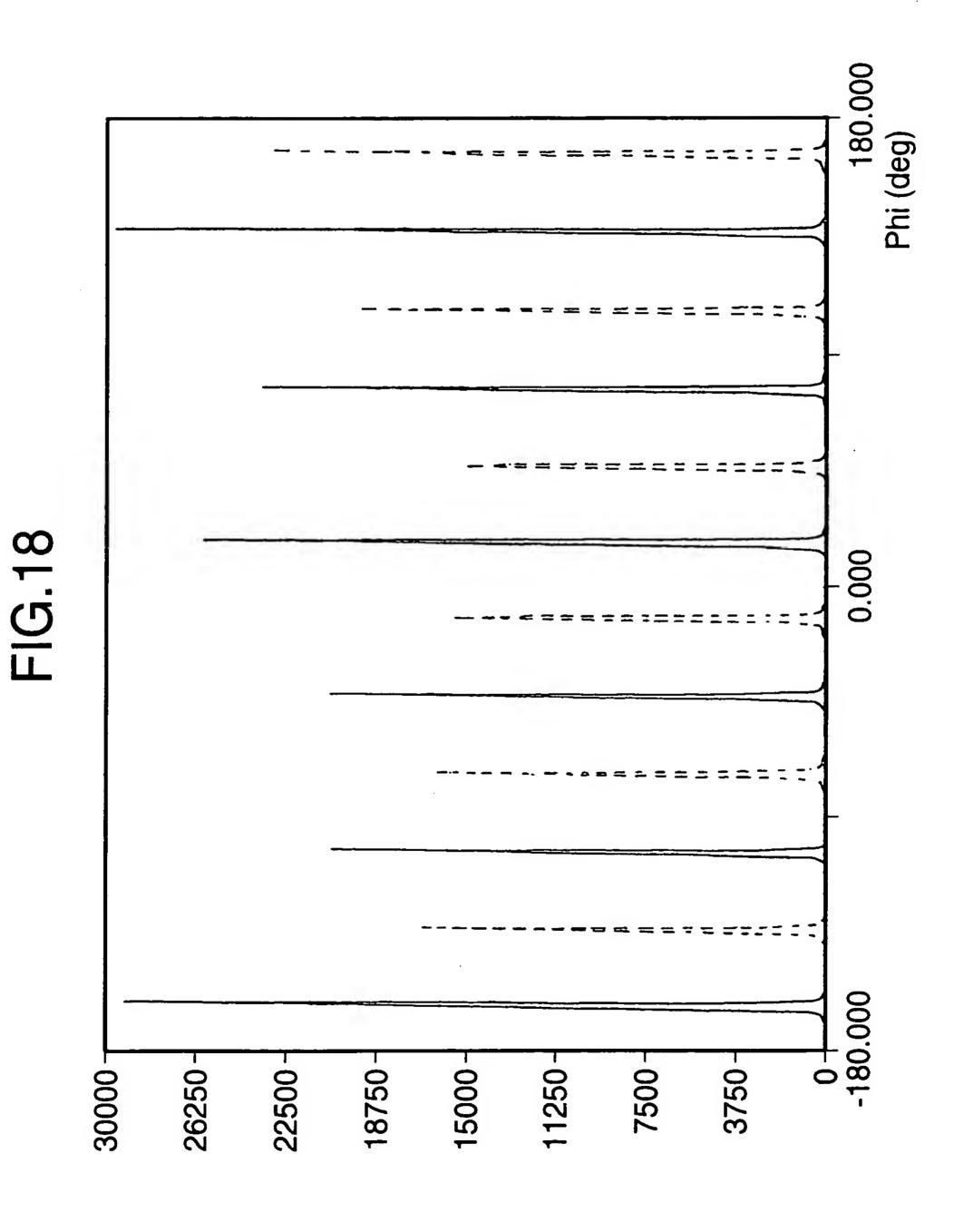




17/26



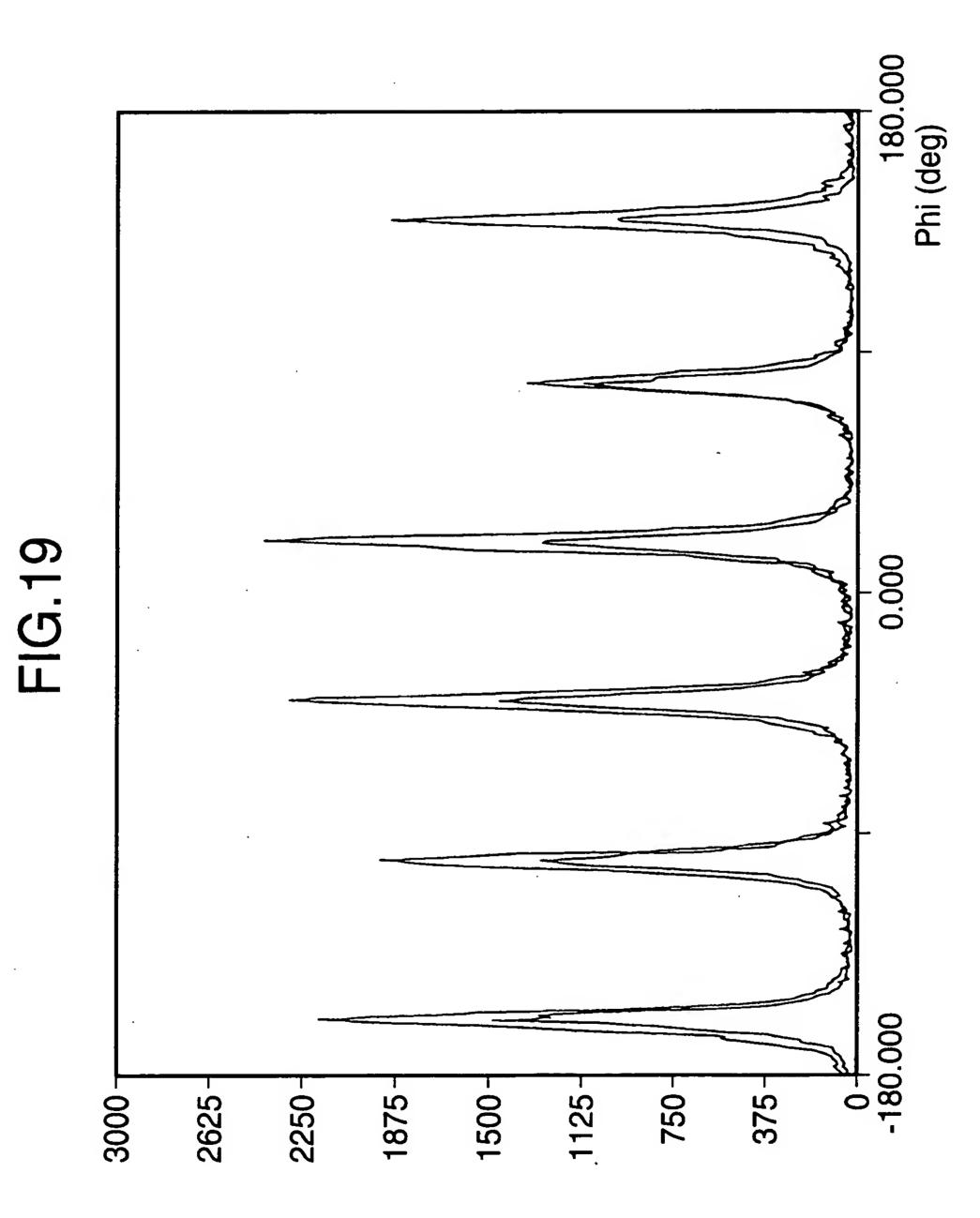
18/26



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19/26

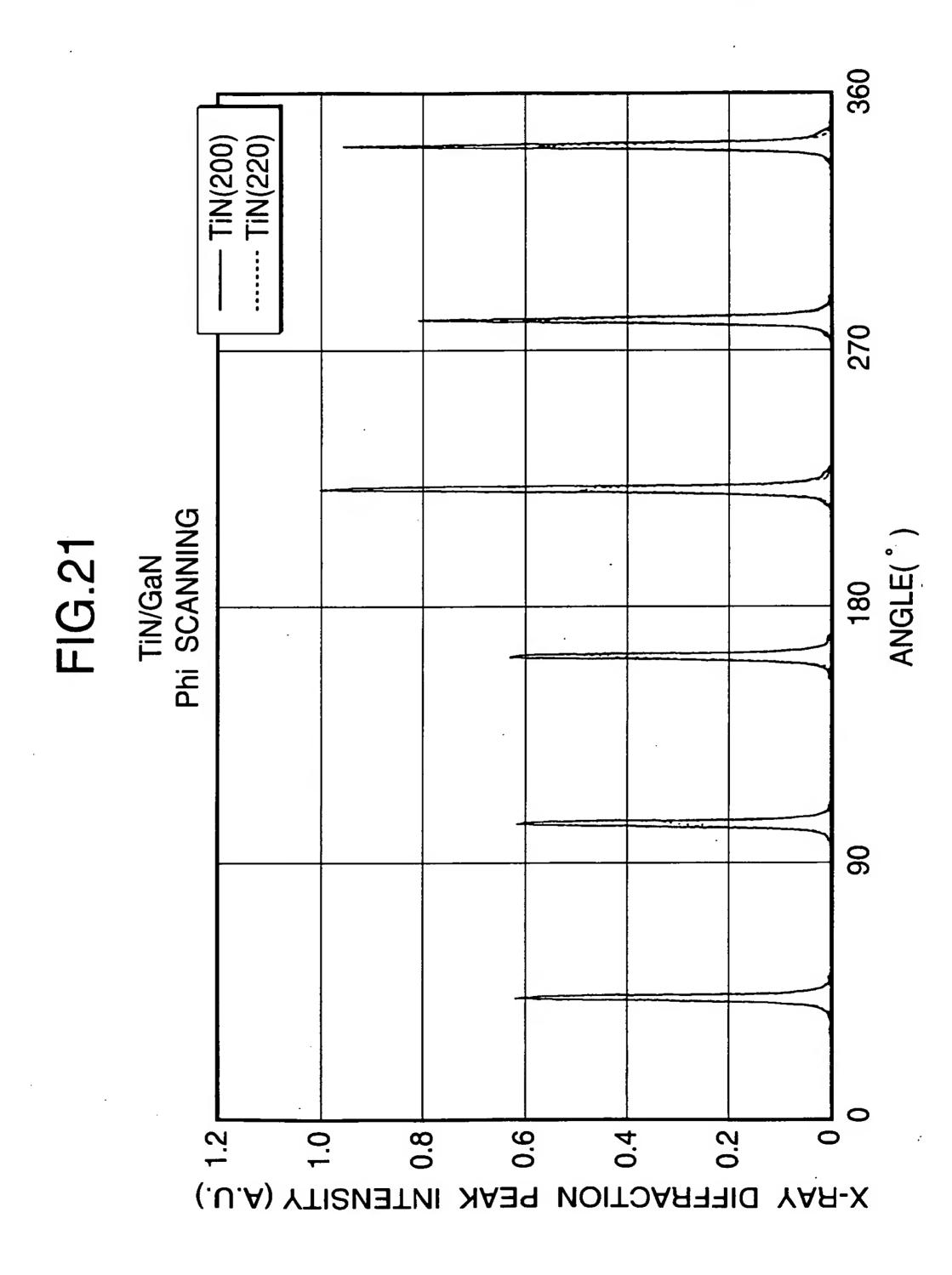
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360 TiN(200) TiN(220) 270 TiN/A12O3 Phi SCANNING FIG.20 180 ANGLE(°) 90 X-RAY DIFFRACTION PEAK INTENSITY (A.U.)

20/26



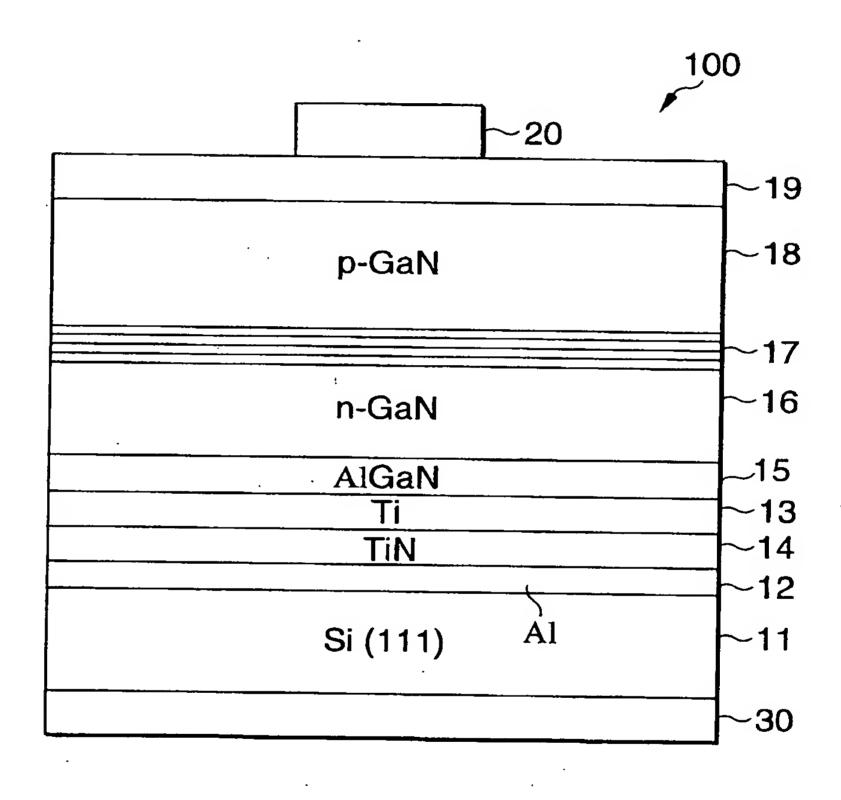
21/26

360 Ti/Tin/Gan Phi SCANNING FIG.22 180 ANGLE(°) X-RAY DIFFRACTION PEAK INTENSITY (A.U.)

22/26



FIG.23



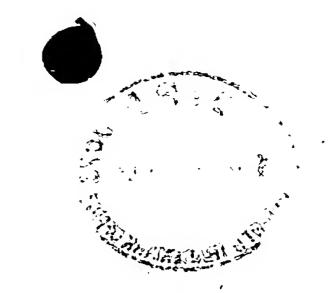
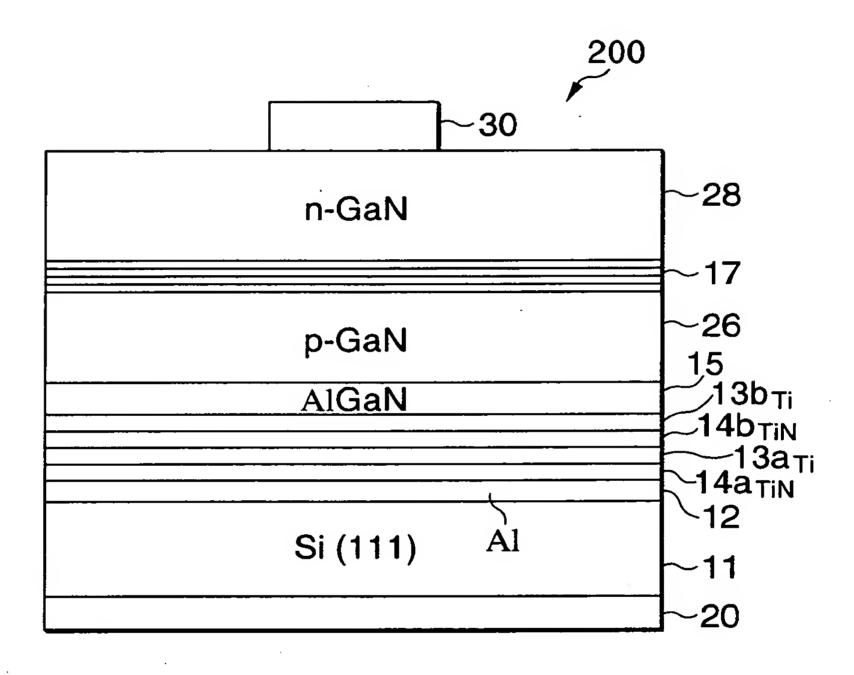


FIG.24



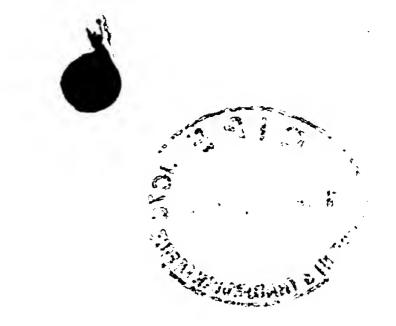
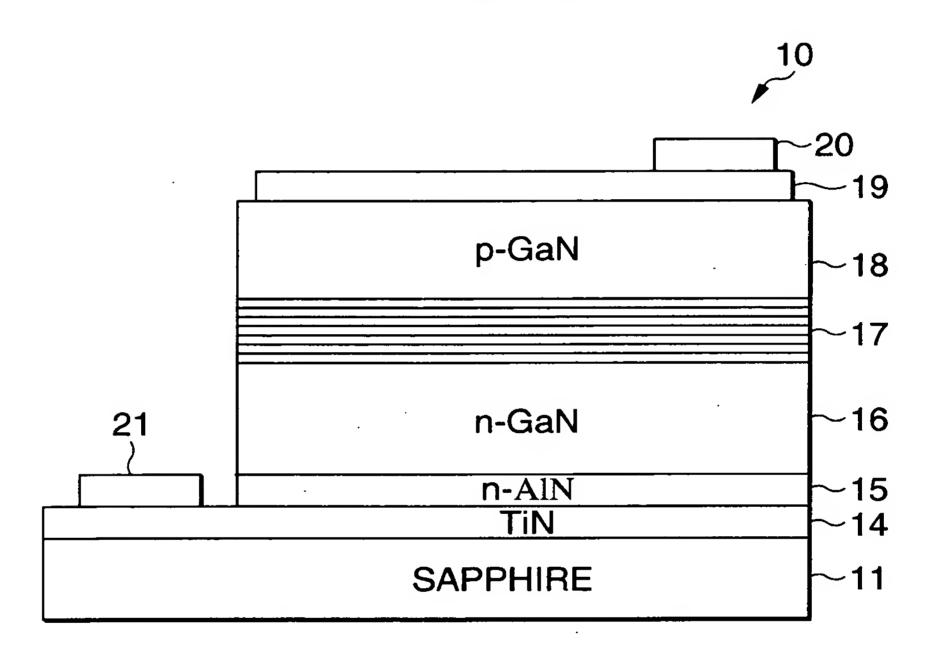


FIG.25





26/26

FIG.26

